Leveraged Financing

Ian Giddy
Four Applications of Valuation

- Business restructuring: breakup value of public companies
- Financial restructuring: before and after
- Mergers and acquisitions
- Valuing a private company
What Does Value Mean? Public vs. Private

- Public Company Valuation
  - maximum share price
- Private Company Valuation
  - maximize after-tax personal income
  - build personal wealth
  - protect wealth from taxes
“Enhance Shareholder Value?”

Depends on Corporate Life Cycle

<table>
<thead>
<tr>
<th>BUSINESS</th>
<th>Start-Up</th>
<th>Growth</th>
<th>Early Maturity</th>
<th>Late Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>PERSONAL</td>
<td>Creation</td>
<td>Growth</td>
<td>Preservation</td>
<td>Transfer</td>
</tr>
</tbody>
</table>
Managing Value

- Maximize corporate expenses
- Shift income to low-tax bracket family
  - trade off payroll taxes if employed
  - better to make family S-corp holders or limited partners
- Own assets privately, lease to company
- Lever company to finance new investments
- Multiple corporations:
  - distribute income and value
  - lower tax bracket
Uses of Private Company Valuation

- Estate planning
- Merger & acquisition
- IPO
- ESOP
- Phantom stock options
- Stock repurchase (buy/sell agreements)
  - First right of refusal
  - Shareholder disputes
- Private equity investments
Private Valuation Concepts

- Corporate value
  - Value of company if acquired whole
- Controlling interest premium
- Marketability (illiquidity) discount
- Minority interest discount
  - “Swing vote”: a minority share that effectively controls the company
Private Companies: Typical Valuation Methods

- Book value
- Market comparables
  - earnings multiples
    - weighted averages of recent earnings
    - earnings adjusted for recurring operations
    - earnings normalized for related party transactions
- Prices of prior arm’s-length stock sales
- Discounted cash flow/VC method/LBO
Marketability Discounts

- No market for shares versus public company
- Lacks liquidity unless:
  - do an IPO
  - sell or merge the business
  - sell shares to company or other shareholders
- Flotation costs must be incurred to sell
- Typical range: 15-35%
Minority Interest Discounts

- Cannot influence dividends
  - insecure income stream
- Shareholders have no control
  - can be squeezed-out
  - no influence on Board of Directors
- Typical discount range: 35-50%
  - degree of discount affected by buy/sell agreements, preemptive rights, appraisal rights, employment agreements, etc
  - as specified in shareholders’ agreement
Relationships Between Discounts

**Issue 1**

- Private Company?
  - Marketability Discount

  - 15-35%

**Issue 2**

- Controlling Interest or Minority Interest?
  - Control
    - Control Premium
      - 20-25%
  - Minority
    - Minority Discount
      - 35-50%
M&A and Leverage

Company has unused debt capacity

Takeover?

Leveraged buyout?

Leveraged recapitalization?
Private Pitfalls

- Methods: same
- Problems:
  - No market price
  - No history of reported information
  - Data provided can be distorted
Private Pitfalls

- Revenue overstated?
- Costs understated? Overstated?
- New costs that will be incurred?
- Intangible value?
LBO: A Temporary Capital Structure

- **Stage 1:** Pre-LBO
- **Stage 2:** LBO financing
- **Stage 3:** LBO refinancing
- **Stage 4:** Debt paydown

**COST OF CAPITAL** vs. **DEBT RATIO**
12-Step Method

- Evaluating cost of deal
- Estimating borrowing capacity
- Estimating cash costs of funding
- Estimating growth rates of sales, expenses, etc
- Projecting cash flows (FCFF and FCFE)
- Projecting debt amortization
- Calculating terminal value of FCFE and FCFF
- Estimating costs of capital to find PV
- Making sense of the deal
## Cost of the Deal

### Estimating cost of deal

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shares</td>
<td>10</td>
</tr>
<tr>
<td>Price</td>
<td>$45</td>
</tr>
<tr>
<td>Premium</td>
<td>15%</td>
</tr>
<tr>
<td>Equity cost</td>
<td>$518</td>
</tr>
<tr>
<td>Debt cost</td>
<td>$55</td>
</tr>
<tr>
<td>Fees</td>
<td>5%</td>
</tr>
<tr>
<td>Capex &amp; restructuring</td>
<td>10%</td>
</tr>
<tr>
<td>Total cost of deal</td>
<td>$658</td>
</tr>
</tbody>
</table>

*lbocapacity.xls on giddy.org*
**Borrowing Capacity**

**Estimating borrowing capacity**

<table>
<thead>
<tr>
<th>Given:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EBIT</td>
<td>$95</td>
</tr>
<tr>
<td>Min EBIT int coverage ratio</td>
<td>1.3</td>
</tr>
<tr>
<td>Interest capacity</td>
<td>$73</td>
</tr>
<tr>
<td>Interest rate</td>
<td>16.00%</td>
</tr>
<tr>
<td>Debt capacity</td>
<td>$457</td>
</tr>
</tbody>
</table>

*From table lbocapacity.xls on giddy.org*
## Capital Structure

### Preliminary capital structure

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt</td>
<td>$ 457</td>
</tr>
<tr>
<td>Missing</td>
<td>$ 177</td>
</tr>
<tr>
<td>Mgt equity</td>
<td>$ 25</td>
</tr>
<tr>
<td>Total financing</td>
<td>$ 658</td>
</tr>
</tbody>
</table>

lbocapacity.xls on giddy.org
LBO Financing

NEWCO

Cost of purchasing the business
Senior debt $457
Mezzanine
Equity $25

What securities? What returns? What investors?
# Cash Flows and Debt Repayment

<table>
<thead>
<tr>
<th>Cash Flows and debt repayment</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOI</td>
<td>95</td>
<td>95</td>
<td>95</td>
<td>95</td>
<td>95</td>
</tr>
<tr>
<td>Principal</td>
<td>$ 457</td>
<td>$ 457</td>
<td>$ 457</td>
<td>$ 457</td>
<td>$ 457</td>
</tr>
<tr>
<td>Interest</td>
<td>73</td>
<td>55</td>
<td>51</td>
<td>46</td>
<td>40</td>
</tr>
<tr>
<td>Tax</td>
<td>9</td>
<td>17</td>
<td>21</td>
<td>24</td>
<td>28</td>
</tr>
<tr>
<td>Add depr of</td>
<td>57</td>
<td>11.4</td>
<td>11.4</td>
<td>11.4</td>
<td>11.4</td>
</tr>
<tr>
<td>Less capex</td>
<td>$ 10.0</td>
<td>$ 10.5</td>
<td>$ 11.0</td>
<td>$ 11.5</td>
<td>$ 12.1</td>
</tr>
<tr>
<td>Cash avail to repay debt</td>
<td>19</td>
<td>33</td>
<td>39</td>
<td>45</td>
<td>52</td>
</tr>
<tr>
<td>Remaining debt</td>
<td>438</td>
<td>405</td>
<td>366</td>
<td>321</td>
<td>269</td>
</tr>
</tbody>
</table>
Exit

Company gets bloated or slack and stock price falls

LBO offer made

LBO completed

Restructuring
  - Efficiencies
  - Divestitures
  - Financial

IPO or sale of company

LBO financing lined up

<table>
<thead>
<tr>
<th>Rates of return</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IPO @ NOIx</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>727</td>
</tr>
<tr>
<td>VCs</td>
<td>87.6%</td>
<td>$ (177)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Managers</td>
<td>12.4%</td>
<td>$ (25)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$ (202)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>90</td>
</tr>
</tbody>
</table>

IRR 29%

? years 3-9 months 5-7 years
Case Study

Photronics

Flexics
Using what you have learned about M&A valuation, private company valuation and leverage capacity, estimate a range of values for the company.

- What should Flexics’ owners do?
- What should the LBO team offer?
- What should Photronics offer?